87

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,112	05/09/2001	Stanley P. Woods	10003186-1	5804

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Agilent Technologies
Legal Department, 51U-PD
Intellectual Property Administration
P.O. Box 58043
Santa Clara, CA 95052-8043

EXAMINER	
FLEMING, FRITZ M	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

Office Action Summary	Application No.	Applicant(s)	
	09/853,112	WOODS ET AL.	
	Examiner	Art Unit	
	Fritz M Fleming	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Fritz M. Fleming

FRITZ FLEMING
PRIMARY EXAMINER
GROUP 2100

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 17-39 have been considered but are moot in view of the new ground(s) of rejection.

The newly claimed limitations are rejected per the detailed analysis below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 17-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eidson '374 in view of Eidson '753 and Read et al.

Eidson '374 is the primary reference and teaches a majority of the claimed limitations. For example, note a system per Figures 1 and 2. Note a set of modules 18x in the form of instruments and the coordinator 12. Note a communication link 17 in the form of the communications bus so that each module 18x and 12 are capable of communicating on the bus with each other. Per column 5, lines 57-64, the bus 17 can be a GP-IB network, local area network, or other similar communication media. Each module 18x has a clock 22 and means, not shown, as the real time clocks 22 are synchronized using an external timing signal 36 (i.e. a message) per column 5, lines 21-37, via the clock 34 in the coordinator 12, so that, per column 4, lines 11-15, the coordinator can synchronize its internal operation with the remainder of the system and to generate instructions for the instruments 18. Note that the timing signal 36 appears on the same bus 17 as the instrument output signals 32 and the instruction signals 16, such that functions such as a voltage measurement or a provided stimulus are coordinated by the synchronized clocks per column 4, lines 16+. While the use of a local area network is explicitly suggested, a set of communications links is not shown, nor is the use of a communications device. However, note that combination with other references is explicitly taught at column 5, lines 21+, as it is taught that techniques for time synchronization are described in the literature and that "persons ordinarily skilled in the

art are capable of using these messages and algorithms to synchronize clocks to a degree of accuracy that is required to practice the present invention" and that "with some minor modifications, the present invention may be practiced on a GP-IB network, local area network, or other similar communication media."

Eidson '753 shows a communications network 16, with a communications device 18, in the form of a smart hub, which can be an ordinary router in an ETHERNET based network. The communications device 18 enables communications between the various modules 14x, especially 12-a and 12-2 per column 3, lines 59/60, over the network 16. Obviously the selection of the smart hub 18 is in response to the physical placement of the modules 14x, as it is the use of the smart hub/router that allows for the connection of the multiple modules 14(1-3) to the network, and for them to communicate with each other per column 3, lines 49-63. Note that a set of links are thus set up via the connections of 14(1-3) to 18 to 16, and it is the use of the smart hub 18, in response to physical placement of the modules 14(1-3) as hubs/routers are used expressly for this purpose of allowing devices at a certain physical location to connect to a network. Furthermore, the use of a LAN or ETHERNET allows for numerous hubs/routers to be used, as this is the express purpose of LANs and ETHERNETs.

Read et al. teach the final aspect of a LAN interface 16 for the bidirectional communication channel that connects the master control device 12 to slave control devices 14. The master 12 has a clock 18 with master time 22, and each of the slaves 14 has a clock synchronizing means 28 for maintaining the slave time 30, as shown in Figure 3a. Note that each slave 14 has an event controller 34 to record a time

coordinated event or cause such to occur per column 4, lines 52+. The synchronization process occurs over the bus 16, per column 6, lines 1+, via the clock set command 50 sent globally to all devices 14 over bus 16. Time stamped messages are issued by devices 14 to the master 12 again via time stamped message 52 over bus 16. Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify Eidson '374 per the teachings of Eidson '753 and Read et al. for the express purposes set forth by Eidson '374, namely being the ability to allow for the use of a local area network (thereby allowing for the use of a communications device such as a router or hub), as well as the ability to synchronize the clocks. The other claims are set forth as follow:

- Claim 18: smart hub 18.
- Claim 19: a smart hub 18 is also a router in an ETHERNET LAN, and thus a communications repeater.
- Claim 20: a smart hub 18 in the form of a router is a communications switch.
- Claim 21: per the example of Eidson '374, an applied stimulus 31 triggered by a timing signal 23 from the real time clock 22.
- Claim 22: per the example of Eidson '374, a voltage reading is made at 1000, with time signal 27 associated with the measurement 30 and time stamping of an event per Read et al. in 52.
- Claim 23: Eidson '374 per a voltage reading at 1000.

- Claim 24: subnets are an integral part of LANs and ETHERNETs, thus the use of smart hubs or routers on an extended LAN or ETHERNET allows for the use of sub-nets.
- Claim 25: per Eidson '374, a voltage measurement to be taken at 1000 is sent via an instruction signal 16 from the coordinator 12 via bus 17 and stored in the module 18 buffer 24 and read by circuitry 20.
- Claim 26: per Eidson '374, the same applies to a stimulus 31 applied per the timing signal 23.
- Claim 27: while a time interval is not explicitly set forth, such is obvious subject matter in view of Eidson '374, as measurements are not just limited to a single time instant, as a device under test 28 is usually under test for an extended period of time, thereby necessitating the use of intervals of measurement, as such is a routine matter of testing.
- Claim 28: the same applies to a stimulus applied over a time interval.
- Claim 29: both Eidson '374 and Read et al. and Eidson '753 show the use of the bus to transmit a message containing the measurement data.
- Claims 30-39 are rendered obvious per the reasons applied to the apparatus above, noting that operations described in the combined references covers such. In order for the apparatus to function, it has to be put together including the selection of the bus and it links, the modules and the smart hubs/routers.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 703-308-1483. The examiner can normally be reached on M-F, 0600-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fritz M Fleming
Primary Examiner
Art Unit 2182

fmf